

## ABSTRACT

A composite containing nano magnetic particles is provided. The composite includes nano magnetic particles in a dielectric matrix. The matrix is made of an inorganic material such as silica, alumina or hydrosilsesquioxane, or an organic material such as polyimide, polymethyl methacrylate (PMMA) or methyl silsesquioxane. The nano magnetic particles consist of ( $\gamma$ -Fe<sub>2</sub>O<sub>3</sub>), chromium oxide (CrO<sub>2</sub>), europium oxide (EuO), NiZn-ferrite, MnZn-ferrite, Yttrium-iron garnet or indium (In).